

**Federal Communications Commission
Washington, DC 20554**

**DA 10-2251
Released: November 29, 2010**

**Business Broadband Capability Survey Results
November 2010
Summary of Results**

The Federal Communications Commission's survey of 3,506 American managers, owners or IT directors at businesses with 5 or more employees finds that nearly all businesses report having at least one broadband Internet connection (95%).

- For those businesses with 11 or more locations, 86% report all of their offices have Internet access.
- 95% of all businesses report having a broadband connection to at least one location.

Businesses subscribe to a range of technologies, with most businesses reporting DSL (73%) or dedicated line connections (15%). Small businesses (defined as companies with five to 25 employees) are more likely to have DSL connections and less likely to have dedicated lines than their larger counterparts:

- 76% of small businesses compared with 50% of largest businesses (defined as businesses with over 501 employees) have DSL.
- 12% of small businesses compared with 42% of largest businesses connect via dedicated lines (a T-1, DS-3, OC-3 or other type of dedicated internet connection).

Similar to residential consumers, almost half (54%) of businesses do not know their purchased Internet connection speed.

The survey also queried businesses about their satisfaction with their broadband service and future plans to upgrade:

- 63% of businesses report that they are very satisfied with their current service.
- For those businesses planning to upgrade their service, running new applications and improving communication with customers were the most cited reasons for doing so.

The survey asked respondents about barriers to getting a faster Internet connection:

- Most businesses (85%) were not planning to upgrade their service in the next 12 months, citing adequacy of their current connection, a skepticism that increased speed would improve productivity and concerns about cost as the major reasons not to upgrade.
- Cost of service was a barrier to upgrading for 50% of businesses: 30% cited it as a major reason, while 20% cited it as a minor reason.

Respondents were asked about their common uses of broadband. The most cited purposes were buying products or supplies, researching and advertising online.

Finally, businesses were asked about their monthly spending on various telecommunications services:

- Overall, the median for spending on broadband was \$125 per month, while the mean was \$2,198.
- The median for small business spending on broadband was \$95 per month.
- Medium-sized businesses (defined as companies with 26 to 100 employees) spent a median of \$150 per month, with large businesses spending \$600 per month and the largest businesses surveyed spending a median of \$950 and a mean of \$93,573.

In December 2009 through January 2010, the Federal Communications Commission contracted with Princeton Survey Research Associates International to conduct a survey of 3,056 managers, owners or IT directors at businesses throughout the United States. The survey included questions about businesses' use of the Internet and various types of broadband technology in terms of availability, speed and cost. The sample consisted of 2,025 interviews with small businesses (5 to 25 employees), 744 interviews with medium businesses (26 to 100 employees), 412 interviews with large businesses (101 to 500 employees) and 325 interviews with the largest businesses (501 or more employees). Below is a summary of key results.

I. Internet and broadband adoption by businesses

Nearly all businesses surveyed reported having some type of Internet access: 98% with a single location have Internet access, 87% with 2 to 10 locations have access at all locations and 86% of those firms with 11 or more locations have access at all locations.¹ The majority of businesses (95%) report having some type of broadband connection; and adoption varies little across business size or number of locations.

Exhibit 1.

Percent of businesses adopting broadband by various characteristics	
	Adopters
Small	95%
Medium	96
Large	95
Largest	94
Minority- or Women-owned business	94
One office / location	95
Two or three offices / locations*	96
Four to 10 offices / locations*	96
11 to 50 offices / locations*	93
More than 50 offices / locations*	92
Results based on businesses reporting access to the Internet via DSL, cable modem, mobile broadband card or cell phone, consumer fiber optic connection, fixed wireless or another type of dedicated line connection.	
*Report access at at least one location.	

Connection types

Businesses across the country use broadband to access the Internet, to connect multiple locations in private networks, and to connect to points of presence of their voice and data services providers. For businesses with only one office or location, DSL-enabled phone lines are the most popular means for connecting to the Internet, with 57% of all businesses with one location reporting this type of connection. The next most likely type of broadband connection for businesses of all size with one location was a cable modem, with 34% reporting this type of connection, followed by a mobile broadband connection (23%). This pattern is similar across business

¹ Based on companies that answered affirmatively the question "Does your company have access to the internet... or send and receive e-mail?"

size, except for large businesses where DSL, cable and mobile wireless connections are still the most common, but there is little variation in the proportions (*see Exhibit 2*).

Exhibit 2.

Percent of businesses with Internet connection types, businesses with one office or location					
	Small	Medium	Large	Largest	Total
A dial-up telephone line	9%	6%	4%	9%	8%
A DSL-enabled phone line (ADSL AND SDSL)	58	51	35	76	57
A cable modem	34	34	36	20	34
Satellite (including VSAT)	4	6	8	1	5
A mobile broadband wireless connection for your computer or cell phone	22	25	39	20	23
A consumer fiber optic connection, such as FIOS	6	11	12	10	7
Fixed Wireless (such as WiMAX)	8	12	10	6	8
Another type of dedicated internet connection	9	17	26	12	10
n=	1,570	416	110	34	2,130

The survey also allowed businesses with more than one location identify up to five connection types. For businesses with more than one location, the results are different than above: cable connections are the most common across all types (70%), followed by DSL connections (51%) and dedicated connections (29%). Smaller businesses are more likely to have DSL connections than larger businesses, and vice versa for dedicated lines. Further, the larger and largest firms have a slightly broader mix of technologies by which they access the Internet, as shown in Exhibit 3.

Exhibit 3.

Percent of businesses with Internet connection types, businesses with more than one office or location					
	Small	Medium	Large	Largest	Total
A dial-up telephone line	4%	2%	5%	4%	4%
A DSL-enabled phone line (ADSL AND SDSL)	54	49	46	46	51
A cable modem	68	75	65	81	70
Satellite (including VSAT)	3	5	6	5	4
A mobile broadband wireless connection for your computer or cell phone	12	9	16	16	12
A consumer fiber optic connection, such as FIOS	4	4	8	9	5

Fixed Wireless (such as WiMAX)	8	3	4	10	6
Another type of dedicated internet connection	18	39	52	43	29
n=	421	322	299	287	1,329

Across all businesses, the majority get access from one provider, with 20% saying they subscribe through multiple providers.

II. Speeds

Most businesses, like residential consumers, cannot identify the speed they subscribe to—54% of all respondents answered “don’t know”. The remaining respondents reported a wide variety of connection speeds, with small businesses less likely to report faster speeds than other business sizes.

Exhibit 4.

Subscribed speeds (among businesses with Internet access)			
	Overall	Small	All other businesses
64 Kbps to less than 1.5 Mbps	12%	12%	11%
1.5 Mbps to less than 3 Mbps	7	7	9
3 Mbps to less than 6 Mbps	6	5	10
6 Mbps to less than 10 Mbps	3	3	4
10 Mbps to less than 25 Mbps	3	3	5
25 Mbps to less than 100 Mbps	2	2	2
100 Mbps or greater	5	4	5
None	1	1	1
Don't know	54	56	47
Refused / No answer	8	9	7

III. Satisfaction with Internet service

Attitudes towards broadband service suppliers do not vary greatly by company size, with approximately 95% of all businesses reporting being very or somewhat satisfied with their Internet service.

Exhibit 4.

How satisfied businesses are with current Internet service, overall	
Very satisfied	63%
Somewhat satisfied	32
Not too satisfied	3
Not at all satisfied	1
Based on businesses with Internet access (n=3,459)	

IV. Plans to upgrade service

Overall, most businesses (85%) surveyed stated no plans to upgrade service over the next 12 months, while 11% indicated a service upgrade was likely in the next 12 months. The largest businesses surveyed were more likely to be planning an upgrade than their smaller counterparts: 18% of the largest businesses compared with 17% of large businesses, 13% of medium businesses and 10% of small businesses. The survey asked the 11% who were planning to make upgrades about the major and minor reasons for buying higher bandwidth, and asked those not planning to upgrade about potential reasons why they were not upgrading.

Exhibit 5.

Reasons why businesses are interested in getting a faster Internet connection				
	Major reason	Minor reason	Not a reason	Don't know / refused
An increasing number of employees	19%	30%	49%	3%
Running new applications	56	24	19	*
Increasing communication with customers	54	22	23	2
Increasing pressure from competitors	15	27	56	2
Any other MAJOR reason not yet mentioned?	22	1	57	21
Based on businesses who plan to get a faster connection in the next 12 months (n=416)				

Exhibit 6.

Reasons why businesses are not interested in getting a faster connection, by business size						
		Small	Medium	Large	Largest	Overall
Current connection is adequate	Major reason	78%	76%	72%	83%	78%
	Minor reason	8	7	13	7	8
A faster connection would not help the company's productivity	Major reason	35	32	31	23	34
	Minor reason	19	21	22	23	20
Company is reducing the number of employees	Major reason	5	2	3	2	4
	Minor reason	9	9	11	11	9
The cost to upgrade is too expensive	Major reason	31	27	33	23	30
	Minor reason	18	26	27	21	20
An internet connection upgrade is not available where the company is located	Major reason	15	14	11	7	15
	Minor reason	12	10	11	6	11
Based on businesses who do not plan to get faster connection in the next 12 months (n=2,893). Note. Respondents were asked to respond if the issue was a major reason, a minor reason or not a reason. Table totals will not add to 100%.						

Businesses most commonly cited that their current connection was adequate, followed by concerns about additional cost and the feeling that a faster connection would not aid the company's productivity.

Those businesses that did report wanting a faster connection in the next year were primarily interested in running new applications and communicating better with their customers.

V. Strategic Purposes

Respondents were asked to report on whether or not their business currently uses the Internet for some common business purposes. The most commonly reported purpose was using the Internet for business-to-business purchases of products or supplies (84%), followed by conducting research (74%). For those purposes, participation varied little depending on business size, while other purposes, like selling products or services through the company's website and advertising or promoting the company online, were more common for larger businesses than small or medium-sized businesses.²

Exhibit 7.

Businesses who use the Internet for various strategic purposes, by size					
	Small	Medium	Large	Largest	Overall
To advertise or promote the company	58%	66%	73%	74%	60%
To conduct research	73	77	79	79	74
To sell products or services through the company's website	32	40	44	52	35
To buy products or supplies	84	87	87	84	84
To watch video	44	49	59	54	46
To bill or invoice customers	38	41	47	45	39
Based on businesses with Internet access (n=3,459).					

VI. Spending on various telecommunications activities

The survey also asked respondents about the average monthly bills for some of the services they reported their company having. Unsurprisingly, larger businesses reported spending more than small and medium businesses, but the range of responses even within business categories varied considerably.

Exhibit 8.

	Small		Medium		Large		Largest		Overall	
	mean	median	mean	median	mean	median	mean	median	mean	median
Telephone service not including cell phones	\$1,047	\$300	\$1,358	\$600	\$4,688	\$1,500	\$90,410	\$3,000	\$4,433	\$400
Company-issued cell phones including Blackberries or iPhones	\$436	\$300	\$1,310	\$650	\$4,959	\$1,500	\$38,719	\$2,500	\$2,806	\$450
Broadband Internet access service	\$265	\$95	\$476	\$150	\$1,390	\$600	\$93,573	\$950	\$2,198	\$125
Mobile broadband Internet access service, such as Aircards	\$161	\$79	\$287	\$150	\$2,118	\$400	\$1,984	\$750	\$1,386	\$150

² Please see appendix for question as asked in survey.

Appendix A

Selected Questions and Topline Results

Q3a. Does your company have access to the internet... or send and receive e-mail?

Based on those with single location (n=2,110)

- 98 Yes
- 2 No
- 0 Don't know
- * Refused/No answer

Q3b. Thinking about all of your company's locations in the United States, how many have internet access: none of them, only some, or all of them?

Q3bb. Does only one office or location have internet access, two to four offices or five to nine offices?

Based on businesses with two to ten office locations (n=1,101)

- 1 None
- 12 Some
- 7 Only one location
- 4 Two to four locations
- 1 Five to nine locations
- 87 All of them
- * Don't know/Refused/No answer

Q3c. Thinking about all of your company's locations in the United States, how many have internet access: none of them, only some, or all of them?

Q3cc. What percentage of the offices have internet access...1 to 25 percent, 26 to 50 percent, 51 to 75 percent, or 76 to 99 percent?

Based on business with 11 or more locations (n=295)

- 1 None of them
- 12 Only some
- 1 1-25% of the locations
- 4 26-50% of the locations
- * 51-75% of the locations
- 7 76-99% of the locations
- 86 All of them
- 1 Don't know/Refused/No Answer

- Q4. How does your office connect to the internet? Do you now use **[INSERT ITEM in ORDER]** to connect to the internet?

Based on businesses that have one office that has internet access (n=2,130)

	<u>Yes</u>	<u>No</u>	<u>DK</u>	<u>Ref./No answer</u>
a. A dial-up telephone line	8	82	1	9
b. A DSL-enabled phone line (ADSL AND SDSL)	57	37	2	5
c. A cable modem	34	56	2	7
d. Satellite (including VSAT)	5	84	2	10
e. A mobile broadband wireless connection for your computer or cell phone	23	67	1	9
f. A consumer fiber optic connection, such as FIOS	7	82	2	9
g. Fixed Wireless (such as WiMAX)	8	80	2	9
h. Another type of dedicated internet connection	10	79	1	9

- Q4.3 Now thinking of all your offices that have internet access... How do they connect to the internet? If different offices use different types of connections, please tell which types of connections are the most common in your company. **[PRECODED OPEN END; ACCEPT UP TO 5 ANSWERS]**

Based on businesses that have multiple locations and have internet access (n=1,329)

- 4 A dial-up telephone line
- 51 A DSL-enabled phone line (ADSL AND SDSL)
- 30 A cable modem
- 4 Satellite (including VSAT)
- 12 A mobile broadband wireless connection for your computer or cell phone
- 5 A consumer fiber optic connection, such as FIOS
- 6 Fixed Wireless (such as WiMAX)
- 28 T-1/Multiple T-1s
- 2 DS-3/Multiple DS-3s
- * OC-3 /12/48
- 2 Other (**SPECIFY**)
- 2 Don't know
- * Refused/No answer

ADOPT. Company has adopted Broadband Internet Connection

- 95 Yes Adopter
- 4 Not Adopter
- 2 Dial-Up
- 2 No Internet Access
- 1 Not classified

- Q5. Does your company obtain its internet access from only one provider or does your company use more than one internet provider?

Based on businesses with internet access (n=3,459)

- 80 Only one
- 19 More than one
- 1 Don't know
- * Refused/No answer

- Q6. What is the bandwidth that **(INSERT IF SINGLE LOCATION: your company/INSERT IF MULTIPLE LOCATIONS: your office or location)** currently has for its primary downstream connection to the Internet?
[INTERVIEWER NOTE: "KBPS = Kilobits per second" and "MBPS=Megabits per second"]

Based on businesses with internet access (n=3,459)

- 2 64 Kbps
- 5 128 Kbps to less than 768 Kbps
- 5 768 Kbps to less than 1.5 Mbps
- 7 1.5 Mbps to less than 3 Mbps
- 6 3 Mbps to less than 6 Mbps
- 3 6 Mbps to less than 10 Mbps
- 3 10 Mbps to less than 25 Mbps
- 2 25 Mbps to less than 100 Mbps
- 3 100 Mbps to less than 622 Mbps
- 2 622 Mbps or greater
- 1 None
- 54 Don't know
- 8 Refused/No answer

- Q7. Overall, how satisfied are you with your current internet service at your office or location...very satisfied, somewhat satisfied, not too satisfied or not at all satisfied?

Based on businesses with internet access (n=3,459)

- 63 Very satisfied
- 32 Somewhat satisfied
- 3 Not too satisfied
- 1 Not at all satisfied
- * Don't know
- * Refused/No answer

- Q18. Now I'm going to read a list of reasons why some businesses are interested in getting a faster connection to the Internet. For each, please tell me if this is a major reason, a minor reason, or not a reason for your company. **(First/Next)...(INSERT; READ AND RANDOMIZE).**

READ FOR FIRST ITEM, THEN AS NECESSARY: Is this a major reason, a minor reason, or not a reason your company is interested in getting a faster internet connection?

Based on businesses who plan to get faster connection (n=416)

	<u>Major reason</u>	<u>Minor reason</u>	<u>Not a reason</u>	<u>DK</u>	<u>Ref./No answer</u>
a. An increasing number of employees	19	30	49	1	2
b. Running new applications	56	24	19	*	*
c. Increasing communication with customers	54	22	23	0	2
d. Increasing pressure from competitors	15	27	56	1	1
e. Any other MAJOR reason that I haven't mentioned (SPECIFY)	22	1	57	4	17

- Q19. Of the reasons you listed, which would you say is the MOST IMPORTANT reason for getting a faster Internet connection...**(INSERT. READ ITEM IN SAME ORDER IF =1 in Q18)**

Based on businesses who plan to get faster connection (n=416)

- 8 An increasing number of employees
- 31 Running new applications
- 27 Increasing communication with customers
- 3 Increasing pressure from competitors
- 11 Other **(SPECIFY)**
- 14 No major reasons
- 8 Don't know
- 0 Refused/No answer

- Q20. Now I'm going to read a list of reasons why some businesses are NOT interested in getting a faster connection to the Internet. For each, please tell me if this is a major reason, a minor reason, or not a reason for your company. **(First/Next...) (INSERT; ALWAYS READ item a FIRST AND THEN RANDOMIZE)**

READ FOR FIRST ITEM, THEN AS NECESSARY: Is this a major reason, a minor reason, or not a reason your company is not interested in getting a faster internet connection?

Based on businesses who do not plan to get faster connection (n=2,893)

	<u>Major reason</u>	<u>Minor reason</u>	<u>Not a reason</u>	<u>DK</u>	<u>Ref./No answer</u>
a. Current connection is adequate	78	8	13	1	*
b. A faster connection would not help the company's productivity	34	20	43	1	2
c. Company is reducing the number of employees	4	9	83	1	3
d. The cost to upgrade is too expensive	30	20	46	1	3
e. An internet connection upgrade is not available where the company is located	15	11	68	3	3
f. Any other MAJOR reasons that I haven't mentioned (SPECIFY)	1	1	77	5	16

Q21. Of the reasons you listed, which would you say is the MOST IMPORTANT reason for NOT getting a faster Internet connection...(INSERT. READ ITEMS IN SAME ORDER)

Based on businesses who do not plan to get faster connection (n=2,893)

- 62 Current connection is adequate
- 7 A faster connection would not help the company's productivity
- 1 Company is reducing the number of employees
- 13 The cost to upgrade is too expensive
- 8 An internet connection upgrade is not available where the company is located
- * Other (**SPECIFY**)
- 8 No major reasons
- 1 Don't know
- * Refused/No answer

Q22. Now I would like to ask about the bills for some of the services you said your company has. (First/Next,) how much is the company's monthly bill for... **(INSERT; READ ITEMS IN ORDER)?**

	Less than \$250	\$251- \$500	\$501- \$750	\$751- \$1000	\$1001 or more	Don't have	DK	Ref./No Answer
a. Telephone service, NOT including cell phones	27	22	6	4	7	1	24	9
<i>Item b based on businesses that have company issued cell phones (n=2,228)</i>								
b. Company-issued cell phones... including Blackberries or iPhones	29	19	7	6	10	1	18	11
<i>Item c based on businesses that have company issued broadband internet access or if Adopter (n=3,391)</i>								
c. Broadband Internet Access	44	7	2	2	4	3	26	12
<i>Item d based on businesses that have company issued mobile broadband, such as Aircards (n=840)</i>								
d. Mobile Broadband, such as Aircards	43	8	1	2	3	5	24	15

STRATEGIC PURPOSES...

Q23. Next... Please tell me if the employees at your company NOW USE the internet to do any of the following business activities. Do employees now use the internet... **(INSERT; READ AND RANDOMIZE)**?

Based on businesses with internet access (n=3,459)

	<u>Yes, use internet to do this</u>	<u>No, do not use internet to do this</u>	<u>DK</u>	<u>Ref./No answer</u>
a. To advertise or promote the company	60	39	*	*
b. To conduct research	74	25	*	*
c. To sell products or services through the company's website	35	65	*	*
d. To buy products or supplies	84	15	*	*
e. To watch video	46	53	*	1
f. To bill or invoice customers	39	60	*	1